



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,749	06/29/2001	Julien Piot	19414-06164	3359

758 7590 11/05/2003

FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
----------	--------------

2674

DATE MAILED: 11/05/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,749

Applicant(s)

PIOT ET AL.

Examiner

Jennifer T Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 67,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 27-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Dandliker et al. (U.S. Patent No. 5,907,152).

Regarding claims 27 and 36, referring to Figs. 1, 2, and 5C, Dandliker teaches an optical detection system housing a coherent light source (10) for illuminating a surface (15), and an optical sensing assembly comprising a photosensitive array (D1, D2) and a plurality of optical elements (20), a method for detecting movement comprising: generating an illumination spot on the surface (15) by lighting the surface (15) with a coherent light beam from the coherent light source (10), the illumination spot diffusely reflected off the surface (15); arranging the plurality of optical elements (20) to pass a diffusely reflected image of the illumination spot through each optical element (20) onto the photosensor array (D1, D2), the photosensor array (D1, D2) having a plurality of pixels, the diffusely reflected image from at least two optical elements (20) overlapping on a pixel (i.e., photosensor element) to form an overlapped image (30); and generating an unambiguous image data signal from the photosensor array (D1, D2) in response to the overlapped image (30) on the pixel (from col. 3, line 46 to col. 4, line 41 and col. 6, lines 46-65).

Art Unit: 2674

Regarding claims 28 and 40, Dandliker further teaches the overlapped image includes a speckle (3) (from col. 3, line 46 to col. 4, line 41).

Regarding claim 29, Dandliker further teaches the size of the speckle in the overlapped image is greater than an area of the pixel (col. 4, lines 3-63).

Regarding claim 30, Dandliker further teaches the at least one optical element (20) includes an anisotropic, artificially limited aperture (D) optically matched to the photosensitive array (25) to pass the diffusely reflected image of the illumination spot through the optical element (20) onto the photosensor array (20) (from col. 3, line 46 to col. 4, line 41).

Regarding claims 31 and 41, Dandliker further teaches the photosensor array (25) to be sensitive to a movement in the overlapped image in two orthogonal directions (from col. 3, line 46 to col. 4, line 41).

Regarding claim 32, Dandliker further teaches the plurality of optical elements includes at least three lenses (col. 6, lines 62-65).

Regarding claim 33, Dandliker further teaches the plurality of optical elements includes a plurality of lenses, at least one lens having a unique set of optical properties with respect to the remaining lenses (col. 6, lines 62-65).

Regarding claims 34, 39, and 43, Dandliker further teaches determining movement based on a change in the unambiguous image data signal (col. 2, lines 1-67).

Regarding claim 35, Dandliker further teaches photosensitive array comprises a plurality of pixels (col. 4, lines 8-63).

Regarding claim 37, Dandliker further teaches means for generating an illumination spot comprises a laser diode (col. 2, lines 23-40).

Art Unit: 2674

Regarding claim 38, Dandliker further teaches means for arranging the plurality of optical elements comprises a microlens array (Figs. 5A-5C).

Regarding claim 42, Dandliker further teaches means for configuring the photosensor array (D1, D2) comprises the pixel and a plurality of additional pixels arranged together in a two dimensional array (Fig. 5C).

Regarding claim 44, Dandliker further teaches means for determining movement is a cross correlation module (col. 5, line 51 to col. 6, line 65).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dandliker et al. (U.S. Patent No. 5,729,009) teaches method for generating quasi-sinusoidal signals.

Russell (U.S. Patent No. 5,056,080) teaches optical recording/reproducing system using interference techniques.

Jackson (U.S. Patent No. 4,794,384) teaches optical translator device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**. The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 2674

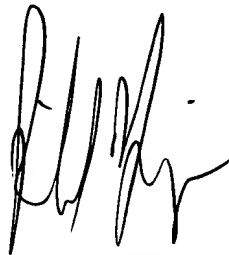
Washington, DC. 20231

Or faxed to: 703-872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen
10/10/2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600